Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application. Please amend misnumbered claims 2-25 as follows:

Listing of Claims:

1. (Original) A device for manipulating particles using dielectrophoresis, the device comprising:

a substrate;

an insulating ridge on the substrate;

a plurality of electrodes positioned to generate a spatially non-uniform electric field across the insulating ridge.

2. (Original) A device according to claim 1, further comprising a plurality of the insulating ridges.

~~2~~3. (Currently Amended) A device according to claim 1, wherein the substrate comprises glass.

~~3~~4. (Currently Amended) A device according to claim 1, wherein the substrate comprises a polymer.

~~4~~5. (Currently Amended) A device according to claim 1, wherein the insulating ridges comprise an insulating material supported by a non-insulating material.

~~5~~6. (Currently Amended) A device according to claim 1, further comprising a voltage source connected to the plurality of electrodes.

~~6~~7. (Currently Amended) A device according to claim 1, wherein the plurality of ridges on the substrate define a surface of a first fluid channel.

~~7~~8. (Currently Amended) A device according to claim ~~6~~7, further comprising a fluid port connected to the first channel.

~~8~~9. (Currently Amended) A device according to claim ~~6~~7, further comprising a second fluid channel connected to the first fluid channel.

~~9~~10. (Currently Amended) A device according to claim 1, wherein the plurality of ridges are each at an angle of between 20 and 80 degrees relative to a direction of fluid flow.

~~10~~11. (Currently Amended) A device according to claim 1, wherein the plurality of ridges are each at an angle of about 45 degrees relative to a direction of fluid flow.

~~11~~12. (Currently Amended) A device according to claim 1, wherein the plurality of ridges includes a first ridge and a second ridge, said first and second ridges being positioned at different angles relative to a direction of fluid flow.

~~12~~13. (Currently Amended) A device according to claim 1, wherein at least one ridge of the plurality of ridges is curved toward a concentration area.

~~13~~14. (Currently Amended) A device according to claim 1, wherein the plurality of ridges are curved toward a concentration area.

~~14~~15. (Currently Amended) A device according to claim ~~9~~10, further comprising:

a plurality of impedance matching ridges substantially parallel to the direction of fluid flow.

~~15~~16. (Currently Amended) A device according to claim ~~12~~13, further comprising:

a plurality of impedance matching ridges substantially parallel to a direction of fluid flow.

~~16~~17. (Currently Amended) A device according to claim 1, wherein the spatially non-uniform electric field generated across the ridges exerts a dielectrophoretic force on at least one of said particles.

~~17~~18. (Currently Amended) A device according to claim ~~16~~17, wherein said particles comprise particles selected from the group of particles consisting of bacteria, cells, and viruses.

~~18~~19. (Currently Amended) A method for manipulating particles using dielectrophoresis, the method comprising:

generating a spatially non-uniform electric field across an insulating ridge;

passing a sample fluid containing the particles across the insulating ridge, the spatially non-uniform electric field exerting a dielectrophoretic force on the particles thereby constraining motion of at least one particle; and

transporting at least the constrained particle along the ridge.

~~19~~20. (Currently Amended) A method according to claim ~~18~~19, wherein the act of transporting the particle comprises electrokinetic transport.

~~20~~21. (Currently Amended) A method according to claim ~~18~~19, wherein the act of transporting the particle comprises advection.

~~21~~22. (Currently Amended) A method according to claim ~~18~~19, wherein the act of transporting the particle comprises transporting particles using a gravitational force.

~~22~~23. (Currently Amended) A method according to claim ~~18~~19, wherein the act of contacting the insulating ridge with a sample fluid comprises flowing the sample fluid across the insulating ridge.

~~23~~24. (Currently Amended) A method according to claim ~~22~~23, wherein the insulating ridges are positioned at an angle with respect to the direction of fluid flow.

~~24~~25. (Currently Amended) A method according to claim ~~18~~19, further comprising transporting the particles to a concentration area.

~~25~~26. (Currently Amended) A method according to claim ~~18~~19, further comprising:

generating a spatially non-uniform electric field across a plurality of insulating

ridges including a first ridge and a second ridge, thereby constraining motion of at least a first particle to a region adjacent the first ridge;

changing the spatially non-uniform electric field such that the dielectrophoretic force on the first particle is decreased; and

transporting the first particle to the second ridge.